2SC3352, 2SC3352A

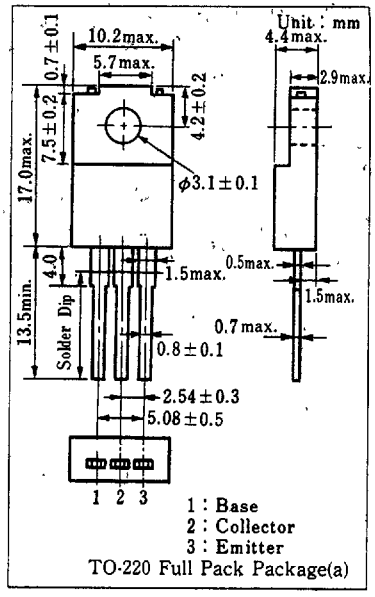
Silicon NPN Triple-Diffused Junction Mesa Type

High Breakdown Voltage, High Speed Switching

■ Features

- High speed switching
- High collector-base voltage (V_{CBO})
- Low collector-emitter saturation voltage ($V_{CE\ (sat)}$)
- "Full Pack" package for simplified mounting on a heat sink with one screw

■ Package Dimensions



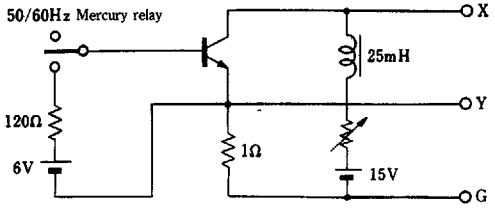
■ Absolute Maximum Ratings (Tc=25°C)

Item		Symbol	Value	Unit
Collector-base voltage	2SC3352	V_{CBO}	800	V
	2SC3352A		900	
Collector-emitter voltage		V_{CEO}	500	V
Emitter-base voltage		V_{EBO}	8	V
Peak collector current		I_{CP}	3	A
Collector current		I_C	1.5	A
Base current		I_B	0.5	A
Collector power dissipation	Tc=25°C	P_C	25	W
	Ta=25°C		2	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 ~ +150	°C

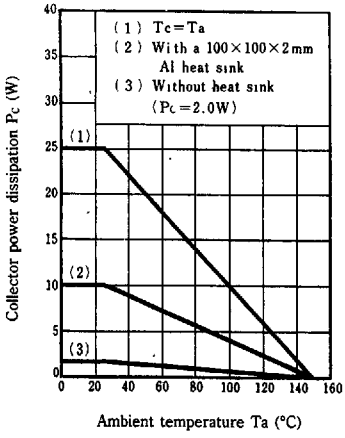
■ Electrical Characteristics (Tc=25°C)

Item		Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	2SC3352	I_{CBO}	V_{CB}=800 V, I_E=0			100	μA
	2SC3352A		V_{CB}=900 V, I_E=0			100	
Emitter cutoff current		I_{EBO}	V_{EB}=5 V, I_C=0			100	μA
Collector-emitter voltage		$V_{CEO(sus)}$	I_C=0.2 A, L=25 mH	500			V
DC current gain		h_{FE1}	V_{CE}=5 V, I_C=0.1 A	15			
		h_{FE2}	V_{CE}=5 V, I_C=1 A	8			
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=1 A, I_B=0.2 A			1	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C=1 A, I_B=0.2 A			1.5	V
Transition frequency		f_T	V_{CE}=10V, I_C=0.2A, f=1MHz		2.5		MHz
Turn-on time	2SC3352	t_{on}	I_C=1 A I_{B1}=0.2 A, I_{B2}=−0.2 A V_{CC}=200V			1	μs
	2SC3352A					1.2	
Storage time		t_{stg}				3	μs
Fall time	2SC3352	t_f				1	μs
	2SC3352A					1.2	

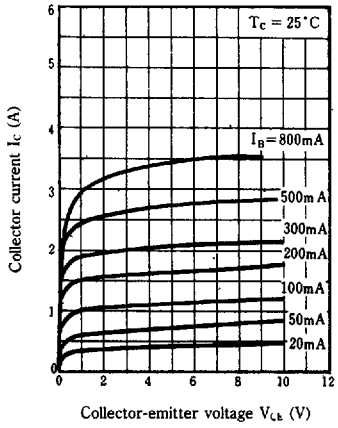
* $V_{CEO\ (sus)}$ Test method



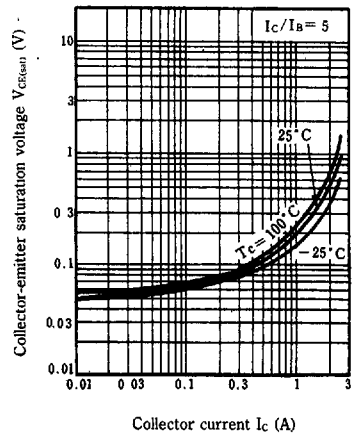
$P_C - Ta$



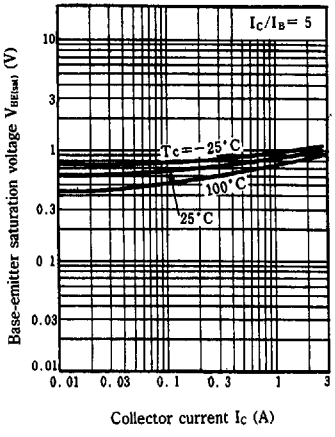
$I_C - V_{CE}$



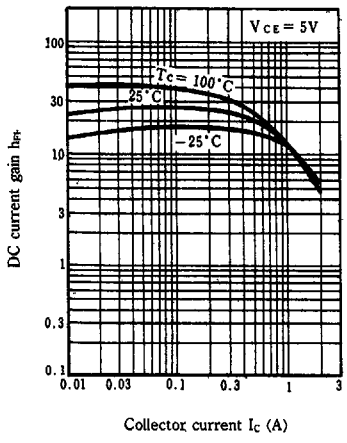
$V_{CE(sat)} - I_C$



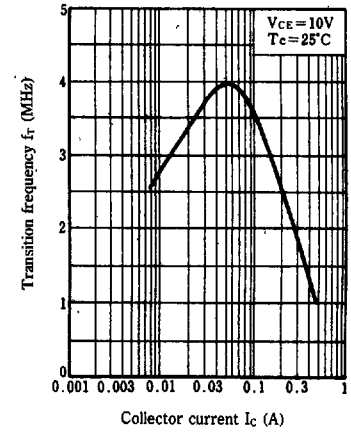
$V_{BE(sat)} - I_C$



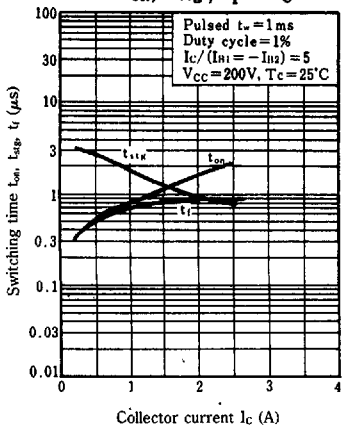
$h_{FE} - I_C$



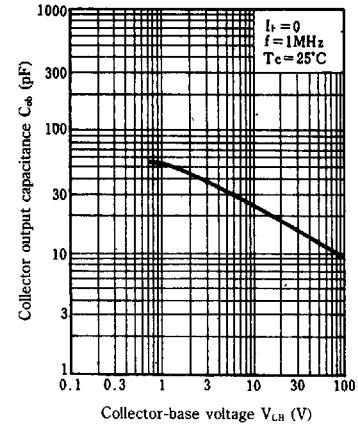
$f_T - I_C$



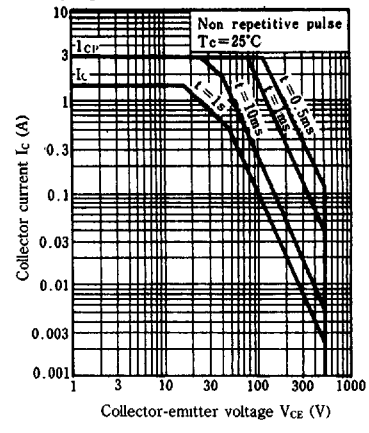
$t_{on}, t_{stg}, t_f - I_C$



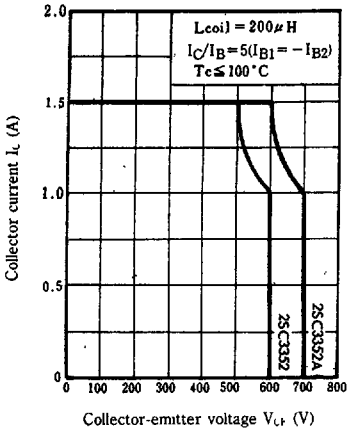
$C_{ob} - V_{CB}$



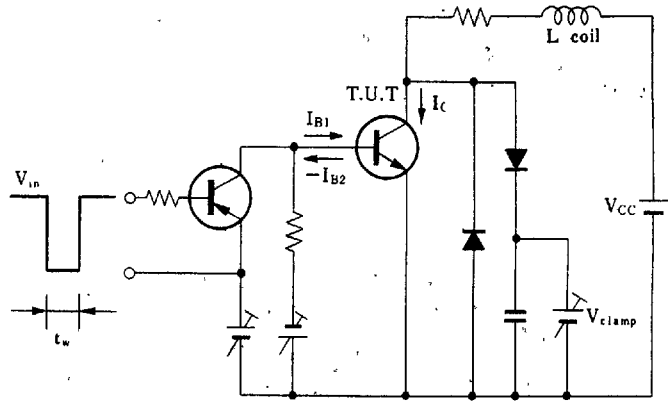
Safety operation area-forward bias (ASO)



Safety operation area-reverse bias (ASO)



Measurement circuit of reverse bias ASO



$R_{th(t)}-t$